

303 1"

Work Order ID 144636

144636

Page 1

April 21, 2016 2:26:46 PM

Item ID: D3954-1

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Gwt Pin

Start Date: 5/3/2016 Start Qty: 30.00 *30*

Cust Item ID:

Required Date: 5/17/2016 Req'd Qty: 30.00 *30*

Customer:

Reference:

Approvals: Process Plan: MLJ Date APR 22 2016 Tooling: _____ Date: _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
----------	--------------

D3954	D
-------	---

100

0.00

100

Doosan

Doosan Lathe

Memo

1-Turn as per folio FA824 & dwg D3954

FOLIO REV: AADWG REV: D

2-Deburr as required

0.00

32 ϕ

DAS

45

9-89

2016-5-16

110

QC2- Inspect parts off machine FAI/FAIB

0.00

110

QC

Quality Control

Memo

0.00

32 ϕ

DAS

45

9-89

2016-5-16

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐			FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		
OTHER : ☐					

Work Order ID 144636

April 21, 2016 2:26:46 PM

144636

Page 2

Item ID: D3954-1 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Gwt Pin
 Start Date: 5/3/2016 Start Qty: 30.00 ***30*** Cust Item ID:
 Required Date: 5/17/2016 Req'd Qty: 30.00 ***30*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC8- Inspect parts - second check	0.00							
120						32	0		<i>W.P.</i> 16/5/15
QC	Memo	0.00							
Quality Control									
150	Identify as per dwg & Stock Location: <i>5063</i>	0.00							
150						32			<i>DWS</i> 9-88 MAY 18 2016
Packaging	Memo	0.00							
Packaging									
160	QC21- Final Inspection - Work Order Release	0.00							
160									<i>16/5/18</i> <i>JD</i>
QC	Memo	0.00							
Quality Control									

MCS MAY 18 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Picklist Print

April 21, 2016 2:26:46 PM

Page 1

Work Order ID: 144636

144636

Parent Item: D3954-1

D3954-1

Parent Item Name: Gwt Pin

Start Date: 5/3/2016

Required Date: 5/17/2016

Start Qty: 30.00

Required Qty: 30.00

Comments: IPP REV:A 11.08.16 AS PER REV.C DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M303R1.000		Purchased		No		100	f	38.4870	0.24	7.2			

M303R1 000

303 Round Bar 1.00

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
MAT	0.351	
m133265	0.351	
MAT028	38.136	
m132320	5.487	
<u>m134551</u>	8.649	
m134553	24	

8.649 ⁹¹

DAS
45 2065-16
9-89

DQA: _____ Date: _____

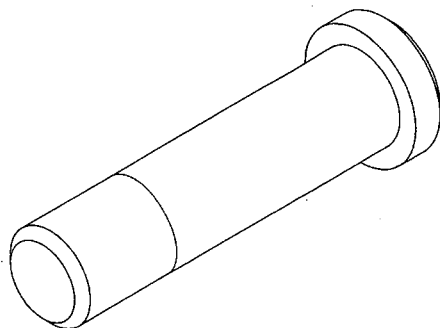


WORK ORDER NON-CONFORMANCE / UPDATE

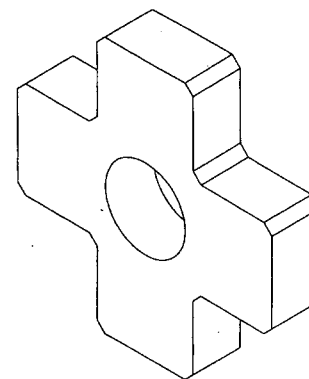
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

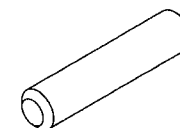


D3954-1 GWT PIN

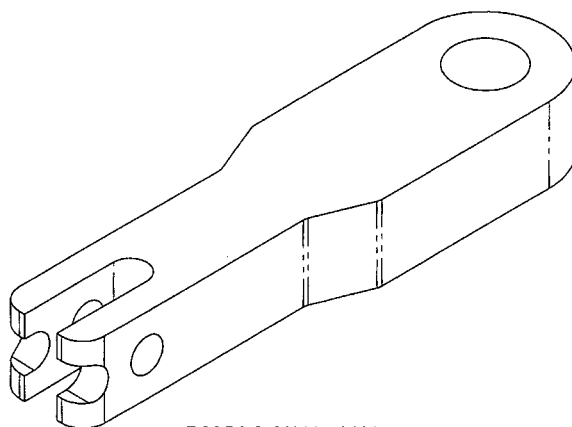


D3954-3 GWT KNOB

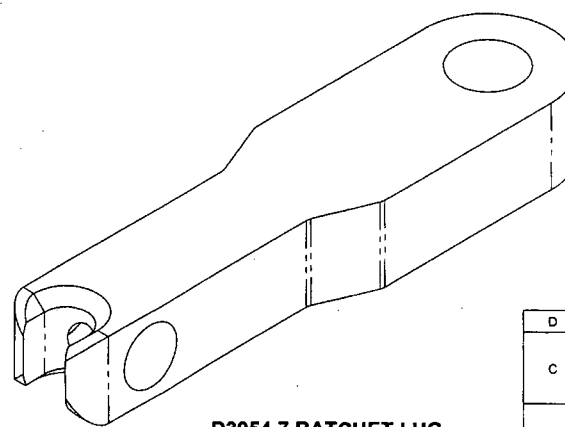
SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 144636 MWS
16-04-22



D3954-9 GWT CHAIN PIN



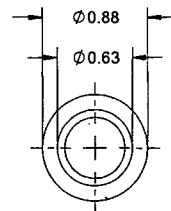
D3954-5 CHAIN LUG



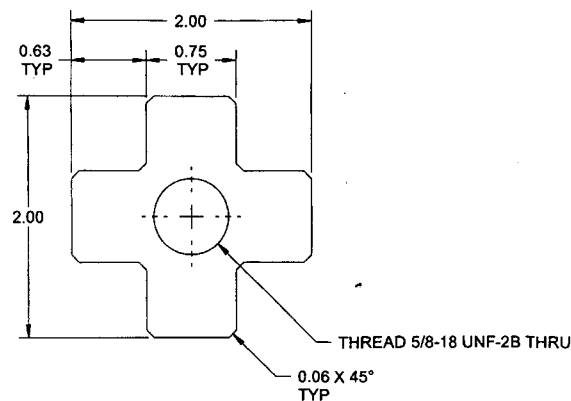
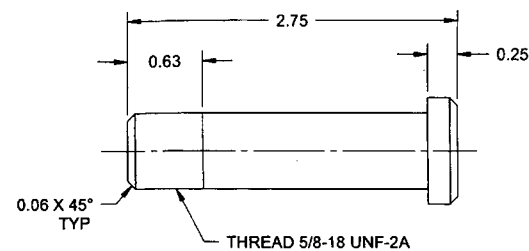
D3954-7 RATCHET LUG

RELEASED
2012-10-01
WJ

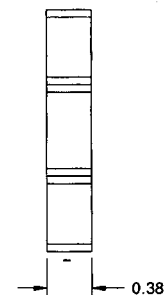
D	ZN A6-2, A6-3. REVISED NOTE 2 TO ADD POWDER COAT.	DC	12.08.10
C	MATERIAL UPDATE FOR D3954-1/-3: NOW STAINLESS STEEL ONLY (A6-2); FINISH CHANGED TO "NONE" FOR D3954-1/-3 (A6-2); TOLERANCE ON Ø0.750 WAS Ø0.75 MAX (D3-3 & D7-3); D3954-9 NOW A PURCHASED PART (A2/A6-3). REASON: PAR11-113.	MB	11.07.27
B	MATERIAL UPDATE FOR ALL COMPONENTS WAS STAINLESS STEEL IS CARBON STEEL FOR ALL COMPONENTS. FINISH FOR ALL COMPONENTS WAS RED POWDER COAT IS YELLOW SPRAY PAINT.	AJS	09.10.15
A	NEW ISSUE	AJS	09.05.26
REV.	DESCRIPTION	BY	DATE
DESIGN	AJS/DSTOW	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA DRAWING NO. D3954 REV. D SHEET 1 OF 3 TITLE MISC MACHINED PARTS GWT KIT NTS COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	
DRAWN	BC		
CHECKED	BE		
MFG. APPR.	W		
APPROVED	W		
DE APPR.	N/A		
DATE	12.08.10		



D3954-1 GWT PIN



D3954-3 GWT KNOB



NOTES:

1) MATERIAL -1: AISI 303/304/316 STAINLESS STEEL ROUND BAR
PER ASTM A582 (303) OR ASTM A276 (304/316)
REF DART SPEC M303R OR M304R

-3: AISI 303/304/316 STAINLESS STEEL SHEET
PER MIL-S-5059 OR AMS 5513 (304) OR AMS 5524 (316)
OR ASTM A240 OR ASME SA240
REF DART SPEC M303S OR M304S

OR:

AISI 303/304/316 STAINLESS STEEL BAR OR AISI 304/316 PLATE
PER ASTM A582 (303) OR A276 (304/316) OR ASTM A240 (304/316)
REF DART SPEC M303B OR M304B

2) FINISH: SPRAY PAINT YELLOW WITH BERTRAND CG1031B PER DART QSI 005 4.2
OR POWDER COAT HYBRID SAFETY YELLOW (4.3.5.12) PER DART QSI 005 4.3 Δ

3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED

4) UNITS: INCHES UNLESS OTHERWISE NOTED

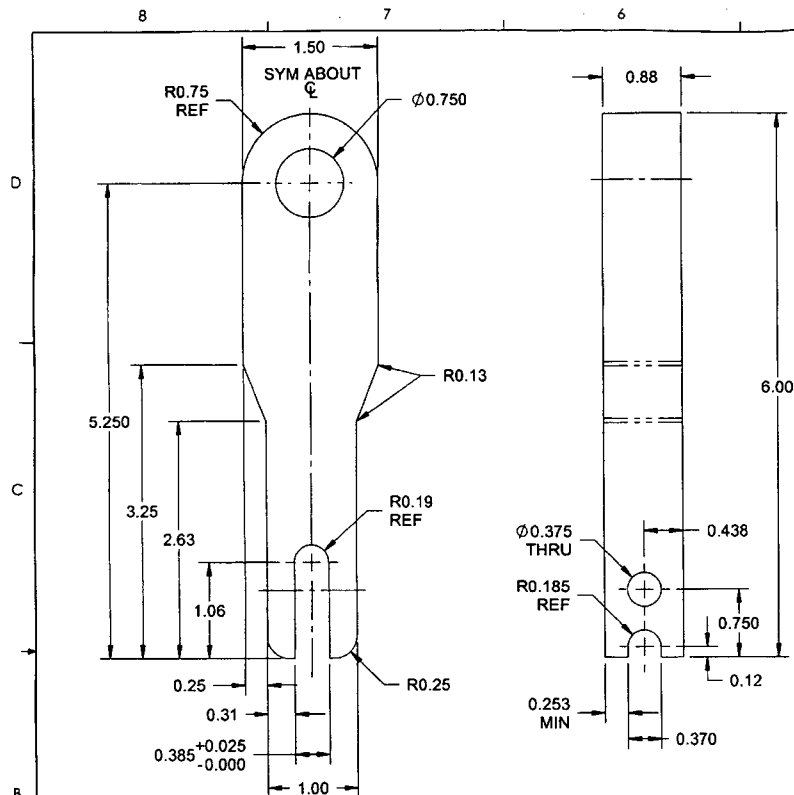
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX

6) IDENTIFICATION: IDENTIFY PER DART QSI 044 6.1

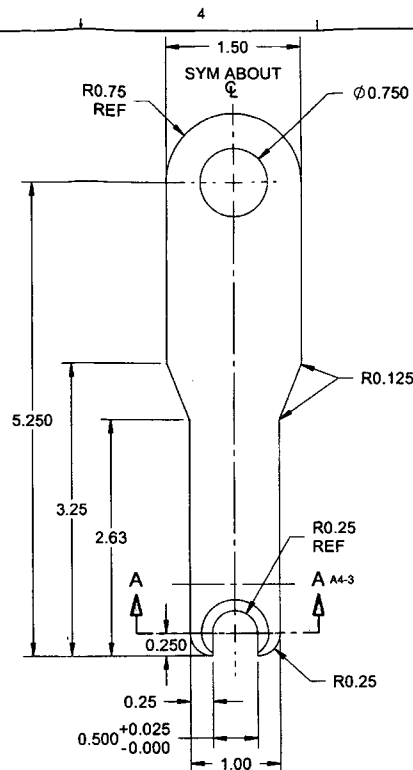
7) WEIGHT -1: 0.26 lbs
-3: 0.23 lbs

RELEASED
R 2012-10-01

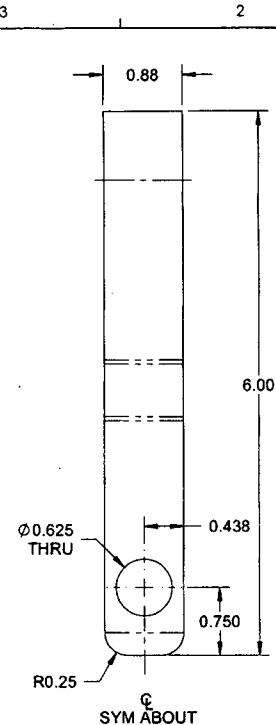
DESIGN	AJS/DSTOW	DART AEROSPACE LTD	
DRAWN	BC	HAWKESBURY, ONTARIO, CANADA	
CHECKED	BC	DRAWING NO.	REV. D
MFG. APPR.	BC	D3954	SHEET 2 OF 3
APPROVED	BC	TITLE	SCALE
DE APPR.	N/A	MISC MACHINED PARTS GWT KIT	NTS
DATE	12.08.10	COPYRIGHT © 2009 BY DART AEROSPACE LTD	
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D3954-5 CHAIN LUG



D3954-7 RATCHET LUG



D3954-9 GWT CHAIN PIN

NOTES:

1) MATERIAL:

-5/-7: AISI 1010-1025 MILD STEEL BAR

PER DART SPEC M1010-B

-9: PURCHASE PART FROM MCMASTER-CARR:

P/N 98381A630 (MILD STEEL)

ALTERNATE MATERIAL:

-5/-7: AISI 303/304/316 STAINLESS STEEL BAR OR AISI 304/316 PLATE

PER ASTM A582 (303) OR A276 (304/316) OR ASTM A240 (304/316)

REF DART SPEC M303B OR M304B

-9: PURCHASE PART FROM MCMASTER-CARR:

P/N 90145A630 (STAINLESS STEEL)

2) FINISH -7 ONLY: SPRAY PAINT YELLOW WITH BERTRAND CG1031B PER DART QSI 005 4.2

OR POWDER COAT HYBRID SAFETY YELLOW (4.3.5.12) PER DART QSI 005 4.3

3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED

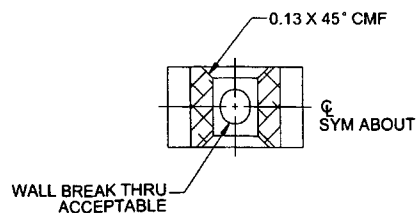
4) UNITS: INCHES UNLESS OTHERWISE NOTED

5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX

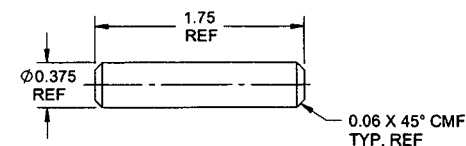
6) IDENTIFICATION: IDENTIFY PER DART QSI 044 6.1

7) WEIGHT -5/-7: 1.56 lbs EACH

-9: 0.05 lbs REF



SECTION A-A



D3954-9 GWT CHAIN PIN

DESIGN	AJS/DSTOW	DART AEROSPACE LTD	
DRAWN	BC	HAWKESBURY, ONTARIO, CANADA	
CHECKED	BE	DRAWING NO.	REV. D
MFG. APPR.	BE	D3954	SHEET 3 OF 3
APPROVED	BE	TITLE	SCALE
DE APPR.	N/A	MISC MACHINED PARTS GWT KIT NTS	
DATE	12.08.10	COPYRIGHT © 2009 BY DART AEROSPACE LTD	
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RELEASED
2012-10-01